



EYFS/KS1 Progression Overview of Knowledge & Skills in Science

EYFS End of Phase Expectations

- Explore the natural world around them, making observations and drawing pictures of animals and plants.
- Know some similarities and differences between the natural world around them and contrasting environments, drawing on their experiences and what has been read in class.
- Understand some important processes and changes in the natural world around them, including the seasons and changing states of matter.

KS1 End of Phase Expectations

The principal focus of science teaching in key stage 1 is:

- enable pupils to experience and observe phenomena, looking more closely at the natural and humanly-constructed world around them.
- They should be encouraged to be curious and ask questions about what they notice.
- They should be helped to develop their understanding of scientific ideas by using different types of scientific enquiry to answer their own questions, including observing changes over a period of time, noticing patterns, grouping and classifying things, carrying out simple comparative tests, and finding things out using secondary sources of information.
- They should begin to use simple scientific language to talk about what they have found out and communicate their ideas to a range of audiences in a variety of ways.
- Most of the learning about science should be done through the use of first-hand practical experiences, but there should also be some use of appropriate secondary sources, such as books, photographs and videos.

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Disciplinary Knowledge		
	EYFS	KS1
Ask questions	<ul style="list-style-type: none"> • Begin to ask questions about the world around them. • Show curiosity about objects, people and the world around them • Ask why things are happening 	<ul style="list-style-type: none"> • Suggest ideas and ask simple questions based on these. • Understand that their questions can be answered or investigated in different ways • Ask a question about what might happen over time or that is looking for a pattern.
Planning enquiry	<ul style="list-style-type: none"> • Engage in new experiences and open-ended play • Learn by trial and error 	<ul style="list-style-type: none"> • Recognise that questions can be answered in different ways • Suggest an investigation that might answer a scientific question • Set up simple practical enquiries • Explain when it might not be fair to compare two things • Carry out a simple fair investigation
Observe, measure & record	<ul style="list-style-type: none"> • Closely observe what animals, people and objects do • Use senses to explore the world around them • Choose resources they need for their activities • Handle equipment effectively 	<ul style="list-style-type: none"> • Begin to use some scientific language to describe observations • Compare several things they observe • Take measurements using standard equipment and choose units • Record observations and simple data using pictures, labels and captions.
Sort & Classify	<ul style="list-style-type: none"> • Make links and notice patterns in their play • Begin to group and sequence • Create simple representations of people objects and events 	<ul style="list-style-type: none"> • Use features to compare, group and sort objects, materials and living things • Identify different ways to sort things • Begin to notice patterns and relationships • Find simple connections or patterns
Report & Interpret	<ul style="list-style-type: none"> • Notice similarities and differences in places, objects, materials and living things • Answer how and why questions about their experiences • Explain why some things happen 	<ul style="list-style-type: none"> • Put information into a chart or table • Use observations and simple data to answer questions • Talk about what they have found out • Use appropriate scientific language to explain ideas • Use simple secondary sources to find answers to questions
Evaluate	<ul style="list-style-type: none"> • Show an awareness of cause and effect 	<ul style="list-style-type: none"> • Explain whether things happened as they expected. • Suggest why things have gone wrong or not worked. • Suggest how their enquiry could be improved.

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Substantive Knowledge		
	EYFS	KS1
Plants	<ul style="list-style-type: none"> Describe and comment on things they have seen whilst outside, including plants and animals. Know how to make a simple record of their observations of the natural world, including animals and plants Know how to discuss how we care for the natural world around us. Notice changes in the leaves, weather and seasons. 	<ul style="list-style-type: none"> Know, identify and name a variety of common wild and garden plants, including deciduous and evergreen trees Know, identify and describe the basic structure of a variety of common flowering plants, including trees Plants can grow from seed or bulbs. Seeds and bulbs germinate and grow into seedlings. Seedlings grow into mature plants Plants need light, water, space, suitable temperature in order to grow
Living Things & their habitats	<ul style="list-style-type: none"> Understand the key features of the life cycle of a plant and an animal. Begin to understand the need to respect and care for the natural environment and all living things 	<ul style="list-style-type: none"> Identify the differences between things that are living, dead, and things that have never been alive, using some of the 7 life processes. Identify that most living things live in habitats to which they are suited Name a variety of plants and animals in their habitats, including microhabitats. Describe how different habitats provide for the basic needs of different kinds of animals and plants, and how they depend on each other Know and explain how animals obtain their food from plants and other animals, using the idea of a simple food chain, and identify and name different sources of food.
Animal including humans	<ul style="list-style-type: none"> Make healthy choices about food, drink, activity and toothbrushing. Begin to make sense of their own life-story and how they have grown and changed. Understand the key features of the life cycle of a plant and an animal. Know and talk about the different factors that support their overall health and wellbeing. Describe and comment on things they have seen whilst outside, including plants and animals. Know how to record their observations of the natural world, Recognise some environments that are different to the one in which they live. Manage their own basic hygiene and personal needs, including dressing, going to the toilet and understanding the importance of healthy food choices 	<ul style="list-style-type: none"> Identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals Identify and name a variety of common animals that are carnivores, herbivores and omnivores Describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals including pets) Know, identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense. Notice that animals, including humans, have offspring which grow into adults Find out about and describe the basic needs of animals, including humans, for survival (water, food and air) Describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene

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Substantive Knowledge	
EYFS	KS1
<p>Materials</p> <ul style="list-style-type: none"> • Use all their senses in hands-on exploration of natural materials. • Explore collections of materials with similar and/or different properties. • Talk about what they see, using a wide vocabulary. • Talk about the differences between materials and changes they notice. • Understand some important processes and changes in the natural world around them, including the seasons and changing states of matter. 	<p>Everyday materials:</p> <ul style="list-style-type: none"> • Know the difference between objects from the material from which it is made • Know, identify and name a variety of everyday materials, including wood, plastic, glass, metal, water, and rock <ul style="list-style-type: none"> • Know and describe the simple physical properties of a variety of everyday materials: hard/soft, flexible/rigid, waterproof/ absorbent. • Group together a variety of everyday materials on the basis of their simple physical properties. • Know the similarities and differences between some everyday materials. <p>Uses of everyday materials:</p> <ul style="list-style-type: none"> • Identify what properties a material needs for a particular purpose. • Name the materials from which different objects are made. • Recognise suitable and unsuitable choices of materials for particular purposes based on physical properties • Identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses. • Know that materials can be either man-made or naturally occurring. • Group objects into man-made or natural categories. • Find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching
<p>Forces</p> <ul style="list-style-type: none"> • Explore how things work • Explore and talk about different forces they can feel • Talk about the differences between materials and changes they notice • Explore the natural world around them • Describe what they see, hear, and feel whilst outside. 	
<p>Earth & Space</p> <ul style="list-style-type: none"> • Learn about the solar system and stars • Learn about space travel • Explore the natural world around them • Describe what they see, hear and feel whilst outside • Understand the effect of change in seasons on the natural world around them • Name the 4 seasons 	<ul style="list-style-type: none"> • Name the 4 seasons and say when in the year they occur • Observe and describe weather associated with the seasons • Observe changes across the 4 seasons • Describe some other features that change throughout the year that are caused by the change in weather e.g. numbers of mini beasts found outside, seed and plant growth, leaves on trees, clothes worn by people. • Explain how day light (from the sun rising to sun setting) length varies across the year (longer in summer, shorter in winter)